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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,706	11/25/2003	Peter J. Schubert	DP-308423	7484

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EXAMINER	
ARTHUR JEANGLAUDE, GERTRUDE	
ART UNIT	**PAPER NUMBER**
3661	

DATE MAILED: 11/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/722,706	SCHUBERT, PETER J.	
	Examiner	Art Unit	
	Gertrude Arthur-Jeanglaude	3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Schiffmann (U.S. Patent. 6,192,305).

As to claims 1, 18, Schiffmann discloses a roll angle estimation apparatus and method for predicting a future roll angle of a vehicle (See abstract), the apparatus comprising: an angular accelerometer (angular accelerations; see col. 13, lines 16-23) for sensing angular acceleration of a vehicle and producing an output signal indicative thereof (See Fig. 2B where signal is outputted from angular acceleration filters 112, 114; see col.12, lines 24-29); an integrator (110) as shown in Fig. 2A for integrating the sensed angular acceleration signal and producing an angular rate (See col. 7, lines 53-67); and a predictor for predicting a future roll angle of the vehicle as a function of the sensed angular acceleration, the angular rate, and a current roll angle (See abstract).

As to claims 2, 11, 19, 26, Schiffmann discloses the current roll angle is determined by integrating the angular rate (See col. 7, lines 49-65).

As to claims 3, 12, Schiffmann discloses the predictor comprises a Taylor series-based predictor for predicting the future roll angle as a quadratic extrapolation (See col. 8, lines 9-67).

As to claims 4, 13, 23, 30, Schiffmann discloses the angular accelerometer senses roll angular acceleration about a longitudinal axis of the vehicle, and the predictor predicts the future roll angle about the longitudinal axis (See col. 2, lines 37-53; col. 6, lines 3-11; col. 13, lines 16-23).

As to claims 5, 14, Schiffmann discloses the integrator and predictor are performed by a controller (MCU) (See col. 4, lines 48-64).

As to claim 6, Schiffmann discloses the controller further compares the predicted future roll angle to a threshold value and predicts an anticipated vehicle overturn condition based on the comparison (See col. 2, lines 14-25).

As to claims 7, 15, 24, 31, Schiffmann discloses the predictor performs a quadratic as a extrapolation (See col. 8, lines 10-67).

As to claims 8, 16, 21, 28, Schiffmann discloses the integrator performs a numerical integration of the angular acceleration signal based on time steps that vary as a function of rate of change of the acceleration signal (See col. 7, lines 49-67-col. 8, lines 1-9; col. 12, lines 24-32).

As to claims 9, 17, 22, 29, Schiffmann discloses the integrator performs a numerical integration of the angular acceleration signal based on time steps that vary as a function of magnitude of the acceleration signal (See col. 10, lies 46-64).

As to claims 10, 25, Schiffmann discloses a rollover sensing apparatus for predicting an overturn condition for a vehicle, comprising : an angular accelerometer (See angular accelerations; see col. 13, lines 16-23) for sensing angular acceleration of a vehicle and producing an output signal indicative thereof (See Fig. 2B; where signal is outputted from angular acceleration filters 112, 114; see col.12, lines 24-29); an integrator (110) as shown in Fig. 2A for integrating the sensed angular acceleration signal and producing an angular rate (See col. 7, lines 7, lines 53-67); a predictor for predicting a future roll angle, and a current roll angle (See abstract); a comparator (124) for comparing the predicted future roll angle to a threshold value; and an output (50) for generating an output signal indicative of an anticipated vehicle overturn condition prediction based on the comparison (See col. 9, lines 21-34).

As to claims 20, 27, Schiffmann discloses the steps of comparing the predicted future roll angle to a threshold value; and generating a vehicle overturn condition signal based on the comparison (See col. 9, lines 21-34).

Response to Arguments

Applicant's arguments filed on 10/3/05 have been fully considered but they are not persuasive. (See remarks)

REMARKS

Applicant's representative argues on page 3 of remark submitted 10/3/05 that each of the accelerometers employed in Schiffmann are linear accelerometers. The Schiffmann patent, which is assigned to the assignee of the present application, does not employ an angular accelerometer. And further argues that the Examiner may have confused the.

angular rate sensors of Schiffmann with the linear accelerometers when in fact, the Schiffmann patent does not employ an angular accelerometer.

Examiner respectfully disagrees because the reference Schiffmann discloses an angular acceleration as stated in the office action above. The function of the angular accelerometer as stated in the claim 1, is to sense angular acceleration and to produce an output signal. It is shown in col. 12 and col. 13 that Schiffmann discloses angular acceleration. Therefore it is known to Schiffmann to employ an angular accelerometer to sense angular acceleration. All limitations of the claims are met by Schiffmann. Therefore, the rejection is maintained.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Breed (U.S. Pub No. 20040039509) discloses a method and apparatus for controlling a vehicular component.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gertrude Arthur-Jeanglaude whose telephone number is (571) 272-6954. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gertrude A. Jeanglaude
GERTRUDE A. JEANGLAUDE
PRIMARY EXAMINER

GAJ

GAJ

October 31, 2005